

pN1 stage, 190 pts with pT1-2 N2 while 100 pts with pT1/2 pN3 stage. Hystological subtype was luminal A (LA=Er+/Pr+, Her neg G1-G2) in 164 pts; luminal B (LB=Er+/Pr+, Her2 neg G3) in 170 pts; triple negative (TN=Er-Pr-Her2 neg) in 166 pts. Mean age was 65 yrs (range: 40-72 yrs). Patients were treated with chemotherapy according to prognostic features. All patients received whole breast radiotherapy with a totale dose of 50 Gy + 10 Gy boost and 48-50 Gy on supraclavicular fossa. In case of medial tumors, the internal mammary chain was included. Kaplan-Meier and paired t-test were used for statistical analysis.

**Results:** The 5-year LRR and DR were obtained with a median of 6.3 years. The 5-year LRR was 1.9% in LA, 2.8 % in LB, 2.1% in TN ( $p = .72$ ). The 5-year DR was in LA 2%, LB 4.5%, 8 % in TN ( $p < .001$ ). According to nodal status LRR was 1.7% in N1, 2.3% in N2 and 3.8% in N3 status ( $p = .005$ ). The 5-year DR in N1 LA was 2.4 %, for LB was 3%, for TN was 3.5% ( $p = .82$ ) while in N2 LA it was 3 %, for LB was 5% and for TN it was 7.3% ( $p = .06$ ); for N3 LA was 3.5%, for LB was 4.8%, for TN was 8.5%; overall DR of pN1 versus pN2/N3 was statistically significant ( $p = .02$ ). On multivariate analyses high risk of LRR was related to T size ( $T > 2$  cm), presence of lymphovascular invasion, lobular histology; high risk of DR was observed for  $N > 4$  nodes, presence of ECE, Ki 67  $> 30\%$  and age  $< 50$  years.

**Conclusion:** In this analysis triple negative breast cancer patients with pN1 seem to benefit by nodal radiation, but further studies are necessary

#### EP-1185

##### Male breast cancer - outcome with adjuvant treatment

B. Yadav<sup>1</sup>, S. Sharma<sup>1</sup>, R. Singh<sup>1</sup>, S. Ghoshal<sup>1</sup>

<sup>1</sup>PGIMER, Radiation Oncology, Chandigarh, India

**Purpose or Objective:** To analyze outcome with adjuvant treatment in male breast cancer (MBC) patients.

**Material and Methods:** From 1991 to 2013, 68 men with breast cancer were retrospectively analyzed for demographic, clinico-pathological and treatment outcomes. Disease-free survival (DFS) was defined as time duration from diagnosis to first recurrence. Overall survival (OS) was defined as time duration from pathologic diagnosis to death or last follow-up with any death defined as an event. DFS and OS were estimated using Kaplan-Meier method and compared between patients receiving and not receiving adjuvant treatment using log-rank test.

**Results:** Mean age was 55 years (range 30-76). Right, left and bilateral BC was seen in 37(54%), 30(44%) and 1(1%) men respectively. Mean duration of symptoms was 25 months (range 1-240). Comorbidity was present in 22(36%) patients. Family history was present in 3(4%) patients. Mean tumor size was 5x5cm (range 1x1-10x10cm). Nipple was involved in 24(35%) men. Early, locally advanced and metastatic disease was seen in 27(39%), 29(43%) and 13(19%) patients respectively. Majority 51(84%) had IDC histology. In radically treated 56 men, NACT with FAC regimen was given to 10(18%) patients; with CR in 4(40%) and PR in 6(60%) patients. Mastectomy was done in 48(86%) and WLE in 8(14%) men. Margins and nodes were positive in 13(23%) and 30(54%) men respectively. ER, PR and Her2neu positive were 22(39%), 12(22%) and 2(3.5%) patients respectively. Adjuvant radiotherapy, chemotherapy and tamoxifen was received by 45(80%), 25(45%) and 37(66%) men respectively. Median follow up was 52 months (range 1-278). Local recurrence occurred in 8(14.5%) and distant metastasis in 18(33%) men respectively. DFS and OS at 10 year was 41% and 49% respectively. DFS and OS was significantly better in men with adjuvant radiation (53% vs 12%,  $p = 0.002$  and 57% vs 22%,  $p = 0.005$  respectively) and hormonal therapy (58% vs 14%,  $p = 0.004$  and 58% vs 39%,  $p = 0.036$ ). Chemotherapy had no impact on DFS and OS.

**Conclusion:** Adjuvant radiotherapy and hormonal therapy significantly improve DFS and OS in male patients with breast cancer. Chemotherapy had no impact on DFS and OS.

#### EP-1186

##### Late side effects and cosmetic outcome after intraoperative electron radiotherapy in breast cancer

C. Matuschek<sup>1</sup>, E. Boelke<sup>1</sup>, K. Halfmann<sup>1</sup>, M. Ghorbanpour<sup>1</sup>, J. Hoffmann<sup>2</sup>, T. Fehm<sup>2</sup>, W. Budach<sup>1</sup>, S. Mohrmann<sup>2</sup>

<sup>1</sup>University Hospital Düsseldorf Heinrich Heine University Düsseldorf, Radiotherapy and Radiooncology, Düsseldorf, Germany

<sup>2</sup>University Hospital Düsseldorf Heinrich Heine University Düsseldorf, Gynecology, Düsseldorf, Germany

**Purpose or Objective:** The intraoperative boost radiotherapy is a validated method to irradiate the tumor bed immediately after surgery with an effective dose. The most homogeneously dose can be achieved with electrons (intraoperative radiotherapy with electrons = IOERT). Because of the high individual dose are chronic side effects of particular interest. Therefore we investigated the late side effects with a median of 31 months (5-54 months).

**Material and Methods:** From 10/2010 until 12/2013 n=138 patients received IOERT (NOVAC 7, New Radiant Technology, Aprilia, Italy) with 1x10 Gy covering the 90% isodose followed by whole-breast radiotherapy with 50.4 Gy/1.8 Gy SD. 58 patients were re-evaluated regarding late side effects and cosmetic outcome until 10/2015. The energy was determined by measuring the distance from the surface to the rib by intraoperative ultrasound. We investigated the radiogenic side effects according to the LENT-SOMA criteria. Furthermore, we evaluated the cosmetic results (subjective / objective).

**Results:** Pain in the irradiated breast was denied by 81% of all patients. Pain grade 1 was reported by 15.5% and grade 2 by 3.4% of the patients. There was no breast edema detectable in 91.4%. We found an edema grade 1 in 5.2% and grade 2 in 3.4% of the patients. There was no significant correlation between edema and pain ( $p = 0.326$ ). A lymph edema grade 1 in the arm occurred in 5.2%. A retraction of the scar was not recorded for 91.4%, a retraction grade 1 in 6.9% and a retraction grade 2 in 1.7%. None of the patients developed a radiogenic ulcer. Fibrosis was not recorded in 75.9%, a fibrosis grade 1 in 20.7%, a fibrosis grade 2 in 3.4%. Telangiectasia's have not occurred in 96.6%. No visible hyperpigmentation was found for 70.7%, and 29.3% had a grade 1 hyperpigmentation. One patient showed inhomogenities in the heart MRT, which was performed to rule out heart disease. One patient developed pneumonitis. The cosmetic results (patient's view) was very good in 41.4%, good in 41.4%, moderate in 10.3% and bad in 3.4%. The assessment of the physician (physician's view) was in 48.3% very good, good in 34.5%, moderate 6.9% and bad in 1.7%. Moderate or bad results mostly occurred in patients with small breasts and large tumor size.

**Conclusion:** IOERT followed by whole-breast radiotherapy by 50.4Gy/1.8 Gy SD is associated with a low incidence of late side effects. The cosmetic outcome is after objective and subjective assessment in the majority (82.8%) of patients very good or good.

#### EP-1187

##### T-lysyal based cream (Repalysyal) in the prevention of acute skin toxicity in breast cancer patients

A. Rese<sup>1</sup>, E. D'Ippolito<sup>1</sup>, F. Piccolo<sup>1</sup>, P. Romanelli<sup>1</sup>, A. Romano<sup>1</sup>, L. Faraci<sup>1</sup>, E. Toska<sup>1</sup>, F. Pastore<sup>1</sup>, V. De Chiara<sup>1</sup>, L. Coppa<sup>1</sup>, G. Salzano<sup>1</sup>, A. Farella<sup>1</sup>, R. Solla<sup>1</sup>, M. Conson<sup>1</sup>, L. Cella<sup>2</sup>, R. Pacelli<sup>1</sup>

<sup>1</sup>University of Naples "Federico II", Advanced Biomedical Sciences, Naples, Italy

<sup>2</sup>National Research Center, Institute of Biostructures and Bioimaging, Naples, Italy

**Purpose or Objective:** Acute skin toxicity is a frequent side effect of breast irradiation affecting quality of life of breast cancer patients. Ameliorating these unwished events may have a positive impact on the therapeutic course of the patients. In this study we tested a thymine-lysine-hyaluronic